



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,040	04/07/2004	Christoph Ender	KOCH.105133	9247

27910 7590 11/07/2005

STINSON MORRISON HECKER LLP  
ATTN: PATENT GROUP  
1201 WALNUT STREET, SUITE 2800  
KANSAS CITY, MO 64106-2150

EXAMINER
----------

BUSHEY, CHARLES S

ART UNIT	PAPER NUMBER
----------	--------------

1724

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

2

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/821,040	ENDER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Scott Bushey	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-36 and 38-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,18,19,31-36,38 and 39 is/are rejected.
- 7) ☒ Claim(s) 8-17, 20-30, and 40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 1 is objected to because of the following informalities: Claim 1, as amended, ends with “; and”. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-6, 31-36, and 39 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Huber (Figs. 3 and 4; col. 3, lines 65 through col. 4, line 20).
4. Claims 1, 3-7, 18, 19, 31, 32, 36, and 38 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Robinson et al (Figs. 1-6; col. 4, lines 22-32, 40-64).

Applicant should note that all of the chordal sumps (5) and the annular sump (4) are all at the same horizontal level and are all in complete fluid communication with one another since the reference does not suggest any means for impeding flow between the sumps. Further, downcomers (6,7) provide means for draining liquid from the sumps. Therefore, the structure as disclosed by the reference allows for the draining of liquid from one sump to another prior to draining of the liquid into an underlying zone of the column. With respect to the liquid collection channels, Fig. 4 for example, illustrates collection channel (16) with openings (15a), which allow for liquid flow from the collection channel to the underlying sump.

***Allowable Subject Matter***

5. Claims 8-17, 20-30, and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to disclose or suggests means for restricting or impeding flow between intersecting sumps that would otherwise be in full fluid communication with one another, as recited by instant claims 8 and 25. The prior art of record also fails to disclose or suggest the apparatus as recited by instant claims 22, 24, and 40.

***Response to Arguments***

6. Applicant's arguments filed September 28, 2005 have been fully considered but they are not persuasive.

With respect to the arguments as set forth against the Huber reference, such are not found to be persuasive. The apparatus as shown by Figure 4 of Huber illustrates two separate sumps (both having reference numeral 17). With respect to current claim 1, applicant should note that half of the liquid collection channels, or one of the liquid collection regions of Huber are not shown by the Figure for simplicity (note col. 3, lines 70-72). As such, it should be easily recognized that some of the liquid collection channels in each of the liquid collection regions (one shown, one unshown by Fig. 4), drain into the first sump and some drain into the second sump. Alternatively, with respect to current claim 31, the Huber reference (Fig. 4) can be considered to provide a single horizontally distributed liquid collection region having first, second, third and

fourth sets (two sets shown, two sets unshown by Fig. 4), of liquid collection channels which preferentially delivery liquid into either the first or second sump (17).

With respect to the Robinson et al reference, the collection channels (16) have openings (15a) at both ends thereof, which allow for delivery of liquid to two sumps at the same time from a given channel, thus meeting the limitations of claims 1 and 31, as alleged by applicant as untaught by Robinson et al.

7. Applicant's arguments with respect to claims 3, 36, and 39 have been considered but are moot in view of the new grounds of rejection.

### ***Conclusion***

8. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

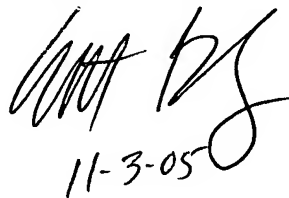
Art Unit: 1724

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bushey whose telephone number is 571 272-1153. The examiner can normally be reached on M-Th 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Scott Bushey  
Primary Examiner  
Art Unit 1724



11-3-05

csb  
11-3-05